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FIRST ROUND OF TALKS ON INDIA-MIDDLE EAST-EUROPE ECONOMIC CORRIDOR

Context

- The Indian delegation concluded its first round of talks with UAE officials on developing the ambitious India-Middle East-Europe Economic Corridor (IMEEC).

India-Middle East-Europe Economic Corridor (IMEC)

- Participants:** During the Delhi G20 Summit, India, USA, UAE, Saudi Arabia, France, Germany, Italy and the European Union signed a Memorandum of Understanding (MoU) to establish the India-Middle East-Europe Economic Corridor.
- Objective:** The corridor will encourage and provide impetus to economic development through enhanced connectivity and economic integration between Asia, West Asia, the Middle East and Europe.

Components

- The India-Middle East-Europe Economic Corridor will consist of two separate corridors,
 - The East corridor** connecting India to West Asia/Middle East and
 - The Northern corridor** connecting West Asia/Middle East to Europe.
- The project would involve the building of a **railway line** across the Arabian Peninsula through the United Arab Emirates and Saudi Arabia and develop **shipping connectivity** to India and Europe on either end of this corridor.
- The corridor could be further developed to transport energy through pipelines and data through an optical fiber link.

Ports Which are Part of IMEC

- India:** Ports in Mundra (Gujarat), Kandla (Gujarat), and Jawaharlal Nehru Port Trust (Navi Mumbai).
- Europe:** Piraeus in Greece, Messina in Southern Italy, and Marseille in France.
- Middle East:** Ports include Fujairah, Jebel Ali, and Abu Dhabi in the UAE, as well as Dammam and Ras Al Khair ports in Saudi Arabia.
- Israel:** Haifa port.

- Railway Line:** The railway line will link Fujairah port in the UAE to Haifa port in Israel, passing through Saudi Arabia (Ghuwaifat and Haradh) and Jordan.

Significance

- Economic Development:** By linking Asia, West Asia, the Middle East and Europe through enhanced connectivity and economic integration, the corridor aims to give a boost to economic development in the regions.
- Connectivity:** The corridor will include a rail line, which, upon completion, will provide a reliable and cost-effective cross-border ship-to-rail transit network.
 - The rail line will supplement the existing multi-modal transport routes enhancing trans-shipment of goods and services from South East Asia through India to West Asia/Middle East and Europe.
- Eco-friendly Infrastructure:** It places emphasis on developing environmentally friendly infrastructure.
- Transformative Integration:** It intends to increase efficiency, reduce costs, secure regional supply chains, increase trade accessibility, enhance economic cooperation, generate jobs and lower greenhouse gas emission, resulting in a transformative integration of Asia, Europe and the Middle East (West Asia).

Opportunities for India

- Alternative to BRI:** It is an alternative to China's Belt and Road Initiative (BRI), which seeks to establish trade and infrastructure networks connecting Asia, Europe, and Africa.
- Bypassing Pakistan:** IMEC breaks Pakistan's veto over India's overland connectivity to the West. Since the 1990s, India has sought various trans-regional connectivity projects with Pakistan. But Pakistan was adamant in its refusal to let India gain access to land-locked Afghanistan and Central Asia.
- Indo-US collaboration in the Middle East:** This project has broken the myth that India and the United States might work together in the Indo-Pacific but not in the Middle East.

Hurdle before IMEC

- The Israel-Palestine conflict** has put a pause on the normalization of Arab-Israel relations which is a key element of the multi-nation initiative.

- **Vulnerability of the Strait of Hormuz:** The entire trade of the IMEC architecture flows through the Strait of Hormuz and with Iran's proximity and control over the strait, the risk of disruptions remain very high.
- **The security challenges** in the region have made other partners reluctant to invest in the project.

Way Forward

- The geopolitical concerns need to be managed by striking a delicate balance in accommodating the geopolitical interests of the participating nations and addressing potential political sensitivities.
- There is also a need to maintain the required security apparatus as the project passes through certain unstable regions of the world.

Source: AIR

FIRST INDIAN SPACE TOURIST AND INDIA'S SPACE TOURISM POTENTIAL

In News

- Blue Origin successfully completed its seventh human spaceflight and the 25th flight for the New Shepard program

About

- The recent Blue Origin journey was a sub-orbital space flight, meaning it did not get into an orbit around the Earth.
- However, plans are afoot for having deeper space trips in the future, potentially to destinations around the Moon, other planets or asteroids.

About Space tourism

- Space tourism refers to human space travel for recreational or leisure purposes.
- It encompasses various types of experiences related to space, including both suborbital and orbital journeys..
- The world's first space tourist was Dennis Tito, an American multimillionaire.
- Indian expatriate Gopi Thotakura made history as the **first Indian space tourist** and the second Indian to venture into space, joining the crew for Amazon founder Jeff Bezos' Blue Origin's NS-25 mission.
 - ♦ Wing Commander Rakesh Sharma, a former Indian Air Force pilot, was the first Indian citizen to fly to space in 1984.

Potential of Space Tourism in India

- **Emerging Market:** India's space industry has been growing steadily, with successful missions by the Indian Space Research Organisation (ISRO).
 - ♦ The country's achievements in satellite launches, lunar exploration, and Mars missions have garnered global attention.
- **Cost-Effective:** India has a reputation for cost-effective satellite launches.
 - ♦ The Polar Satellite Launch Vehicle (PSLV) and the Geosynchronous Satellite Launch Vehicle (GSLV) have demonstrated reliability and affordability.
 - Leveraging these capabilities, India could offer competitive pricing for suborbital and orbital space tourism.
- **Diverse Landscape and Culture:** India's diverse landscapes, from the Himalayas to coastal regions, provide picturesque views from space.
 - ♦ Tourists could witness iconic landmarks, lush greenery, and ancient historical sites.
 - ♦ **Cultural experiences**, such as yoga and meditation, could be integrated into space tourism packages.
- **Collaboration with Private Players:** The government's decision to ease foreign direct investment (FDI) in the space sector will help attract foreign players as well as startups and will boost demand for high-tech jobs.
 - ♦ The government has eased FDI norms in the sector by allowing 100 per cent overseas investment in making components for satellites, as part of efforts to attract overseas players and private companies into the segment.

Challenges

- **Infrastructure Development:** Establishing spaceports, launch facilities, and spacecraft manufacturing centers requires significant investment and expertise.
- Overcoming skepticism and fear associated with space travel will be a challenge.
- Space tourism generates carbon emissions during launches. Balancing economic benefits with environmental concerns is essential.
- **Competition** : Established space tourism companies like SpaceX, Blue Origin, and Virgin Galactic dominate the market.

- Convincing the public about the safety and feasibility of space tourism is crucial
- **Safety and Regulation related challenges**

Steps of India

- India is making significant strides in the field of space tourism, with the Indian Space Research Organisation (ISRO) leading the charge.
- **ISRO** is working on a space tourism program that aims to be operational by 2030.
- The **Indian National Space Promotion and Authorization Center (IN-SPACe)** is working to promote private participation in large-scale space missions, including space tourism

Conclusion and Way Forward

- India's space tourism potential lies in its cost-effective launch services, diverse landscapes, and collaboration with private players.
- However, addressing challenges related to infrastructure, safety, public perception, and environmental impact is crucial for successful space tourism ventures.
- Sustainable practices, such as reusable rockets and eco-friendly propulsion systems, should be prioritized.
- India must differentiate itself by offering unique experiences, competitive pricing, and a strong value proposition.
- Regulatory frameworks need to address liability, insurance, and certification for commercial spaceflights.

Source: IE

6 MILLION TREES DISAPPEARED FROM FARMLANDS

Context

- Researchers have revealed that India may have lost close to 5.8 million full-grown trees in agricultural lands from 2019 to 2022.

About

- **Agroforest trees** in India are remnant trees from forests cleared for agricultural use, offer shade, soil fertilization and other benefits to the land.
 - ♦ **Agroforestry** is the practice of retaining large trees in and along croplands.

- Trees such as mahua, coconut, sangri, neem, babul, shisham, jamun, vegetable hummingbird, karoi and jackfruit in farmlands provide fruits, fuelwood, sap, medicine, mulch, fiber, fodder and wood for animal and human use.

Benefits of Agroforestry

- Agroforestry systems act as **carbon sinks**, reducing greenhouse gas emissions.
- Trees can **provide shade, windbreaks, and microclimate regulation**, which benefit crops by reducing stress from extreme weather conditions.
- Tree roots absorb excess water during heavy rains, **reducing flooding**, while also improving **groundwater recharge**.
- It provides a range of **non-timber forest products** such as fruits, nuts, and medicinal plants, which can contribute to food security and income generation.

Reasons for loss in Agroforest trees

- The conversion of diverse agroforestry systems to **monoculture agriculture**, such as paddy fields, result in the removal of large trees.
- Farmers perceive that the benefits provided by trees in agroforestry systems do not outweigh the costs or effort required to maintain them.
 - ♦ This perception leads to **deliberate removal of trees to make farming practices more convenient** or profitable.
- In regions where water availability is a limiting factor for agriculture, farmers remove trees to **establish bore wells or irrigation systems** to access additional water sources.
- Tree mortality due to natural disturbances such as **wildfires, fungal infections, insect infestations, and droughts** is a natural part of ecosystem dynamics.

Agroforestry in India

- The area under agroforestry in India covers about **8.65%** of India's total geographical area.
 - ♦ About 56% of India is covered by farmland and 20% by forest.
- The highest concentration is in the states of **Uttar Pradesh** (1.86 million ha), followed by **Maharashtra** (1.61 million ha), **Rajasthan** (1.55 million ha) and **Andhra Pradesh** (1.17 million ha).

- **The Sub-Mission on Agroforestry (Har Medh Par Ped) Scheme** was launched in 2016-17 to encourage tree plantation on farm land along with crops/ cropping systems to help the farmers get additional income and make their farming systems more climate resilient and adaptive.

Way Ahead

- India's tree cover has notably expanded in recent years, but it's crucial to recognize that our reporting only accounts for gross losses, without distinguishing tree gains separately.
- A certain loss rate is natural, and the cutting of trees is also part of agroforestry management systems, and not every lost tree is related to climatic disturbances or human appropriation.
- Moreover, mature trees in fields are often removed, with newer trees cultivated in separate block plantations, generally possessing lower ecological significance.

Source: TH

PERSONALITY RIGHTS

Context

- The **Delhi High Court** has protected the **personality and publicity rights of a Bollywood actor**.
 - ♦ The court has restrained various entities – e-commerce stores, AI chatbots, social media accounts etc – from misusing the actor's name, image, voice, and likeness without his consent.

What are Personality Rights?

- Personality rights refer to the **right of a person to protect his/her personality** under the right to privacy or property.
 - ♦ These could include a pose, a mannerism or any aspect of their personality.
- These rights are important to celebrities as their names, photographs or even voices can easily be misused in various advertisements by different companies to boost their sales.
- Many celebrities even register some aspects as a trademark to use them commercially.
 - ♦ For example, **Usain Bolt's "bolting"** or lightning pose is a registered trademark.

Reasons for providing these Rights

- The idea is that only the owner of these distinct features has the right to derive any commercial benefit from it.
- Exclusivity is a big factor in attracting commercial dividends for celebrities.
- Personality rights are not expressly mentioned in a Laws in India but fall under the right to privacy and the right to property.

Are Personality Rights different from Publicity Rights?

- Personality rights consists of **two types of rights**:
 - ♦ Firstly, the **Right of Publicity**, or the right to keep one's image and likeness from being commercially exploited without permission or contractual compensation, which is similar (but not identical) to the use of a trademark;
 - ♦ Secondly, the **Right to Privacy** or the right not to have one's personality represented publicly without permission.
- **Publicity rights** fall into the realm of the '**tort of passing off**', when someone intentionally or unintentionally passes off their goods or services to another party. This type of misrepresentation damages the goodwill of a person or business, resulting in financial or reputational damage.
- Publicity rights are governed by statutes like the **Trade marks Act 1999 and the Copyright Act 1957**.

Legality of Personality Rights

- Celebrities can move the Court and **seek an injunction** when an unauthorised third party uses their personality rights for commercial purposes.
- Personality rights or their protection are not expressly mentioned in a statute in India but are traced to fall under the **right to privacy and the right to property**.
- Many concepts in intellectual property rights used in protection of trademarks such as passing off, deception can be applied while deciding whether a celebrity deserves to be protected through an injunction.
 - ♦ An ex-parte injunction is when relief is granted to a party without hearing the other side.
 - ♦ An omnibus injunction refers to an injunction granted against any unauthorised use- even those that are not mentioned in the plea.

Criteria for Granting Injunction

- In the Titan case, the HC in its order listed out the “basic elements comprising the liability for infringement of the right of publicity.”
- **Validity of the Right:** The plaintiff owns an enforceable right in the identity or persona of a human being.
- **Easy to Identify in the alleged misuse:** The defendant’s unauthorized use must make the celebrity identifiable easily.
- **Celebrity is identifiable:** The unaided identification should be enough if the celebrity is well-known. Otherwise, the plaintiff will have to bring evidence **which adds up at a geometric rate to associate with the plaintiff.**

Previous Cases on Personality Rights

- **Anil Kapoor had moved the Delhi High Court** in a civil suit seeking protection of his personality- his name, photographs, manner of speaking, gestures etc.
 - ♦ He also claimed protection of his copyright in the dialogue and in the image and other associated works.
- In 2022, the Delhi High Court had dealt with a **similar case involving Amitabh Bachchan.**
 - ♦ From using variations of his name such as “Big B” to including his “unique style of addressing the computer the HC enjoined the use of his personality rights.
- In 2015, the Madras High Court, in a similar case involving actor Rajnikanth had observed that **“personality right vests on those persons, who have attained the status of celebrity”.**

Source: TH

26TH MEETING OF THE SBSTTA OF THE CONVENTION ON BIOLOGICAL DIVERSITY (CBD)

Context

- The **26th meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA-26)** of the **Convention on Biological Diversity (CBD)** has concluded recently.

About

- The SBSTTA, is a **multidisciplinary body** open to all Contracting parties, which provides scientific and technical assessments of the status of biodiversity.

- It recommended fully implement **The Biodiversity Plan** adopted at **Montreal in 2022.**

The Kunming-Montreal Global Biodiversity Framework (GBF)

- GBF was adopted by the **COP15** to the **Convention on Biological Diversity in 2022.**
- Its tentative title had been the **"Post-2020 Global Biodiversity Framework"**.
- It has been promoted as a **"Paris Agreement for Nature"**.
- The GBF contains **4 global goals and 23 targets.**
- "Target 3" is especially referred to as the **"30X30" target.**

COP15 Outcomes: '30X30' target

- Under it, delegates committed to protecting **30% of land and 30% of coastal and marine areas by 2030**, fulfilling the deal's highest-profile goal, known as 30-by-30.
- The deal also aspires to **restore 30% of degraded lands and waters** throughout the decade, up from an earlier aim of **20%**.
- Also, the world will strive to prevent destroying intact landscapes and areas with a lot of species, bringing those losses **“close to zero by 2030”.**
- They would be deliberated upon further at the **16th meeting of the Conference of the Parties (COP16).**
 - ♦ The conference will be held in the Colombian city of Cali from October 21-November 1, 2024.

Issues Discussed at the Meeting

- Scientific and technical needs to support the implementation of the Kunming-Montreal Global Biodiversity Framework.
- Detection and identification of living modified organisms.
- Risk assessment and risk management.
- Synthetic biology.
- Marine and coastal biodiversity: Ecologically or biologically significant marine areas and Conservation & sustainable use of marine and coastal biodiversity.
- Biodiversity and health.
- Monitoring framework for the Kunming-Montreal Global Biodiversity Framework.

- The meeting set the stage for a potential agreement on how the world defines — and consequently protects — ecologically or biologically significant marine areas (EBSA).

Convention on Biological Diversity (CBD)

- CBD is the **international legal instrument** for “the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources”.
- It was signed by **150 government leaders at the 1992 Rio Earth Summit**, it has been ratified by **196 nations**.
- Its overall objective is to encourage actions, which will lead to a sustainable future.
- It has two supplementary agreements, the **Cartagena Protocol and Nagoya Protocol**.
 - ♦ Cartagena Protocol on Biosafety seeks to protect biological diversity from the potential risks posed by genetically modified organisms resulting from modern biotechnology.
 - ♦ Nagoya Protocol aims for the fair and equitable sharing of benefits arising out of the utilization of genetic resources.
- The CBD's governing body is the **Conference of the Parties (COP)**.
- All parties that have ratified the treaty meets every two years to review progress, set priorities and commit to work plans.
- **The Secretariat** of the CBD is based in **Montreal, Canada**.

Source: DTE

NEWS IN SHORT

ANENDOPHASIA

Context

- A new study found that some people lack an inner voice, termed “anendophasia,” impacting their verbal memory and rhyme recognition.

About

- It is a rare condition, estimated to **affect about 1 in 10 people**.
- It is characterized by the experience of **not having an ‘inner voice.’**

- Different from the conscience, an inner voice is the sound you imagine inside your head when you are consciously thinking.
- It was earlier assumed that an inner voice was a human universal. However it is not true.

Source: TH

VENUS WATER MYSTERY

Context

- A new study in the journal Nature suggests that Venus lost all its water due to a runaway greenhouse effect caused by a chemical reaction called HCO⁺ dissociative recombination reaction (DR).

About

- On Venus, the HCO⁺ dissociative recombination reaction (DR) occurs in bulk at an altitude of about **125 km**, above the clouds made of **sulphuric acid**.
- **Creation of HCO⁺:** It is created when a carbon monoxide molecule (CO) loses an electron while absorbing an hydrogen atom.
- **DR is the reverse reaction:** HCO⁺ absorbs an electron and breaks up into CO and a hydrogen atom. These energetic hydrogen atoms then escape into space.
- And without hydrogen, there can't be water (H₂O).

Venus

- Venus is the **second planet from the Sun**, and the **sixth largest planet**. It's the **hottest planet** in our solar system.
 - ♦ Its surface temperature is nearly **900 degrees Fahrenheit**.
- **Composition:** Venus is made up of a **central iron core** and a rocky mantle, similar in composition to Earth.
- **Atmosphere:** Venus' atmosphere is made up of mainly **carbon dioxide (96%)** and **nitrogen (3.5%)** with trace amounts of carbon monoxide, sulfur dioxide, water vapor, argon, and helium making up the other **0.5%**.
- **Future Missions:** EnVision orbiter (European space agency), DAVINCI and VERITAS missions (NASA), Shukrayaan (ISRO).

Source: TH

MATERIOVIGILANCE PROGRAMME OF INDIA (MVPI) PLATFORM

In News

- The Drugs Controller General of India (DCGI) has directed all medical device licence holders and manufacturers to report any adverse events related to life-saving medical equipment on the **government's Materiovigilance Programme of India (MvPI) platform**.

Materiovigilance Programme of India (MvPI) platform

- The Ministry of health and family welfare has approved the commencement of **Materiovigilance Programme of India (MvPI)** at Indian pharmacopoeia commission in 2015 to monitor the safety of medical devices in the country.
- It aims to **improve Indian patient safety** by monitoring, recording and analysing the root cause of adverse events or risks associated with the use of medical devices including in-vitro diagnostics by healthcare professionals or patients/users and suggesting regulatory bodies for appropriate action with the sole intention of improving patient safety.

Do you know ?

- Currently in India medical devices including In-vitro diagnostic medical devices have come under the regulation under the Drugs and Cosmetics Act, 1940 and Medical Devices Rules, 2017.
- A license/approval is required for the import/manufacture for marketing of the devices in the country.

Source:TH

ORCAS (KILLER WHALES)

In News

- A group of Orcas sank a 15-metre-long sailing yacht in the Strait of Gibraltar, 22.5 kilometres off the coast of Morocco.

About Orcas (Killer Whales)

- It is the ocean's top predator. It is the largest member of the Delphinidae family, or dolphins.
- They are one of the most recognizable marine mammals, with their distinctive black and white bodies.

- Killer whales are highly social, and most live in social groups called pods
- Killer whales rely on underwater sound to feed, communicate, and navigate.



- Habitat and Distribution:** Globally, killer whales occur in a wide range of habitats, in both open seas and coastal waters.
 - Found in every ocean in the world, they are the most widely distributed of all cetaceans (whales and dolphins).
 - They are most abundant in colder waters like Antarctica, Norway, and Alaska, they are also found in tropical and subtropical waters.
- IUCN Red List Status :** Orcinus orca is listed as Data Deficient.

Source:IE

EMBLICA CHAKRABARTYI

Context:

- Recently, **Emblica Chakrabartyi**, a new **plant species** was discovered from the **Edamalayar forest range of Kerala**.



About *Emblica Chakrabartyi*

- It is a shrub that grows in **tropical rain forests** and attains a height of approximately 2 metres.
 - The leaves are large with a shiny elongated oval shape of up to 13 cm.
 - The flowering and fruiting occur during December to June.
- It belongs to the **Gooseberry (Phyllanthaceae) family** and has been named after **Tapas Chakrabarty, a former scientist at the Botanical Survey of India**, in recognition of his contribution to the study on **Phyllanthaceae**.

Global Presence of the Genus *Emblica*

- Distribution:** It generally grows as shrubs in tropical rainforests, and it has 55 species recorded worldwide.
 - The new plant, i.e. *Emblica Chakrabartyi* is the eleventh from India.

- It is the **16th new plant species** discovered from Ernakulam district within a span of 12 years by the team.

Source: TH

PANAMA CANAL

Context:

- Recently, the Panama Canal Authority informed that the **Panama Canal** is slowly returning to normal to help ships transit, after **severe droughts** linked to El Niño, which have drastically **lowered the water levels in Gatun Lake**.

About



- Panama Canal, formally inaugurated in 1914, is the 82-km waterways connecting the **Atlantic Ocean with the Pacific Ocean** by providing a shortcut through the **Isthmus of Panama**.
- It is a critical route between Europe and the US.
- It has been a major thoroughfare for international trade for **over 100 years**, connecting nearly 2,000 ports in 170 countries.
- McKinsey & Company in a recent report said that an estimated 2.5% of global seaborne trade sails through its locks in an average year.

Do You Know?

- The Panama Canal locks at each end lift ships up to **Gatun Lake**, an artificial freshwater lake 26 m above sea level created by damming up the **Chagres River** and **Lake Alajuela** to reduce the amount of excavation work required for the canal, and then lower the ships at the other end.
- In 2023, there were more than 14,000 vessel transits on this pathway between seas.
 - The operation of the **canal's locks** — which use gates **to raise or lower water levels** in different sections of the canal — depends on water from **Gatun Lake**.

Source: BL

GIANT VIRUSES

Context

- Scientists have unearthed "**giant**" viruses dating back to 1.5 billion years in **Yellowstone's hot springs**.

About

- The term "giant" refers to their **exceptionally large genomes** compared to more common viruses, they do not pose any risk to humans.
- The viruses found in Yellowstone are quite diverse. Some consist of bacteria, while others belong to archaea, single-celled organisms that thrive in extreme environments.
- Significance:** These giant viruses provide valuable insights into a period when single-cell organisms were starting to emerge on Earth.
 - By studying ancient viruses, researchers can gain a better understanding of the evolutionary history and the environmental factors that shaped the origins of life on our planet.

Yellowstone's Hot Springs

- Yellowstone National Park is renowned for its stunning natural features, including its hot springs located in the United States.
- These hot springs are a product of the park's geothermal activity, which stems from the **Yellowstone Caldera**, one of the world's largest volcanic systems.



- Yellowstone's hot springs come in various colors, ranging from vibrant blues and greens to deep oranges and reds.
- These colors are caused by **different types of thermophilic (heat-loving) bacteria and algae** that thrive in the extreme conditions created by the hot water.
- One of the most famous hot springs in Yellowstone is the **Grand Prismatic Spring**, which is the largest hot spring in the United States and the third-largest in the world.

Source: TH

